

REMARKS

Reconsideration is respectfully requested in view of the following remarks.

Claims 3, 6-10, 12, 15-20 and 22-34 are pending.

Rule 1.132 Declaration

Applicants hereby submit a 1.132 Declaration and request the Declaration be entered. In particular the Declaration provides sample papers (Exhibits A-C) demonstrating the differences in properties of the papers produced by the methods of Jaisle and the methods of the invention.

Claim rejections - 35 U.S.C. § 112

Claims 3, 6-10, 12, 15-20 and 22-34 are rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. Applicants respectfully traverse this rejection.

The Office Action states it is not clear where the instant specification supports the 15 to 60 g/m² basis weight of the paper, as claimed as being the weight after impregnation. Moreover, the Office Action states the paragraph beginning at page 2, line 29 of the specification refers to the weight of the prior art paper and then states that not only the actual weight of the paper has to be taken into account when calculating material usage, but that an increase in paper weight also means an increase in the amount of resin needed, in which the Examiner takes this as evidence that the weight of the paper is separate from the weight of the resin used to impregnate the paper.

Applicants respectfully disagree with the Office Action's assertion in that it is unclear where the instant specification supports the 15 to 60 g/m² basis weight of the paper, as claimed as being the weight after impregnation. Furthermore, Applicants assert the whole disclosure must be taken into account and hereby provide the following comments.

This application is a 371 of PCT/EP01/03661, filed March 30, 2001, which was published in German and was later translated into English to comply with US practice. The intended meaning of certain words and/or phrases in the translated version may not have been suitably translated from German into English. The specification describes that it is necessary that a paper be resistant to tearing in order for it to be able to handle mechanical loads imposed during the production of tiles and paper that is not easily distorted. *See* pg. 2, ll. 18-25. The prior art teaches it is necessary that the paper have a paper weight of above 70 g/m² in order for the paper to be sufficiently resistant to tearing. *See* pg. 2, ll. 22-25. Applicants assert that it is understood that 70 g/m² is the total paper weight. The total paper weight including the weight of the paper and the weight of the resin, since the description discusses the prior art paper incorporates resin with the paper and then uses the paper incorporated with resin to form a tile. *See* pg. 1, ll. 15-18.

As presented above, the Office Action is relying on the paragraph beginning at page 2, line 29 of the specification as evidence that the weight of the paper is separate from the weight of the resin used to impregnate the paper recited in. Applicants respectfully disagree. The paragraph beginning at page 2, line 29 discusses the drawbacks of high consumption of resin by papers having high paper weights. The paragraph simply states the cost of manufacture of the paper is correspondingly increased by the higher the weight of the paper, since more resin is required for impregnating paper having a higher paper weight.

Moreover, an object of the invention is to reduce the cost of manufacture of paper by decreasing the paper weight and the amount of resin needed in manufacture of the paper. Additionally, the invention is aimed at a paper, which is substantially resistant to tearing in comparison with the prior art papers. *See* pg. 3, ll. 13-18. Applicants respectfully assert that it is understood that the paper weight recited by the claims is the impregnated paper weight since the object is to decrease the cost of resin used in impregnating the paper and a paper that is substantially resistant to tearing in comparison with the prior art counter-pull paper.

Furthermore, in one embodiment of the invention a resin-acrylate mixture or dispersion, is used for impregnation. With such a mixture or dispersion weights of paper to a lower limit of about 15 g/m² can be achieved. Papers produced in such a way are, with a suitable mixture ratio, sufficiently resistant to tearing in order to be able to be employed in the production of tiles for example as a printed base paper. The paper should not exceed an upper limit of 60 g/m², preferable 40 g/m², in order to achieve sufficiently high cost advantages. Optimum values currently lie between 25 and 35 g/m². *See pg. 5, ll. 1-12.* Additionally, Exhibit B of the Declaration is a paper made according to the invention, the weight of the paper, which is filled with acrylic resin, is 30 g/m².

In view of the above, withdrawal of this rejection is respectfully requested.

Claim rejections - 35 U.S.C. § 103

Claims 31 and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaisle et al. (US 4,473,613) in view of applicant's description of the prior art. Applicants respectfully traverse this rejection.

Claim 31 recites a title comprising a first paper and a second paper in which at least one of the first and second papers includes acrylate present at least predominantly in the interior of the impregnated paper.

Claim 6 further recites the paper is de-areated before the acrylate-containing dispersion is pressed into the paper. In this way the air present in the paper is replaced by the dispersion or mixture. *See pg. 4, ll. 29-30.*

The paper produced in accordance with the present invention is advantageous over finish foil paper since acrylate is present in the paper and not simply wholly or largely on the surface. *See pg. 5, ll. 29-31.* A finish foil paper is a paper that has resin applied to its surface, in which the applied resin gives the paper a glossy finish.

Exhibit B of the Declaration is a paper made according to the invention. The weight of the paper, which is filled with acrylic resin, is 30 g/m². Additionally, the paper has the appearance of normal paper, in that it appears to be a single layer.

Exhibit A of the Declaration is a finish foil paper made according to Jaisle. Jaisle teaches coating the paper with an acrylic resin by passing an untreated paper through a bath comprising an acrylate dispersion resulting in a finish foil having a paper layer and a glossy surface layer, as is observed by the paper of Exhibit A. One disadvantage of a finish foil paper is that splitting between the paper layer and the glossy surface layer can occur upon drying the paper after it is coated. A disadvantage of the glossy surface layer is that it is very smooth, thereby increasing the difficulty of adhering an additional layer, i.e. an abrasive layer, to it. Jaisle teaches a glossy surface layer and therefore fails to teach or suggest the acrylate is present at least predominately in the interior of the coated paper.

Furthermore, Jaisle fails to teach or suggest modifying the finish foil to incorporate the acrylate mixture to be predominantly in the interior of the paper. Nor does Jaisle teach or suggest advantages of having the acrylate mixture predominantly in the interior of the paper.

Jaisle fails to teach or suggest at least one of the first and second papers includes acrylate present at least predominantly in the interior of the impregnated paper. Applicant's description of the prior art fails to remedy the shortcomings of Jaisle.

Moreover, as presented above, Jaisle and applicant's description of the prior art, when combined fail to teach or suggest each claim limitation recited by independent claim 31.

Thus, for at least the reasons discussed above, neither Jaisle nor applicant's description of the prior art, alone or in combination, render the limitations of independent claim 31 obvious. Applicants assert that independent claim 31 is patentably distinguishable over Jaisle, applicant's description of the prior art, or any combination thereof. Therefore, withdrawal of this rejection is respectfully requested with regard to independent claim 31, as well as claim 32 that depends therefrom. Withdrawal of this rejection is respectfully requested.

Claims 34, 15, 26, 27, 16-18, 28-30 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaisle et al. (US 4,473,613) in view of applicant's description of the prior art at page 1, lines 15-20, as applied to claims 31-32 above, further in view of Mehta (US 5,213,883). After review of the Office Action, it appears claim 12 should have been included with independent claim 33 rather than independent claim 34. Therefore, Applicants have addressed this rejection with regard to claims 34, 15-18 and 26-30. Applicants respectfully traverse this rejection.

Claim 34, although not identical in scope to independent claim 31, is directed to an impregnated paper and recites limitations similar to those recited in claim 31. For example, claim 34 recites the acrylate is predominately in the interior of the paper. For at least the reasons discussed above for Jaisle in view of applicant's description of the prior art, neither Jaisle nor applicant's description of the prior art, alone or in combination, render the features of independent claim 34 obvious. Furthermore, Mehta fails to remedy the shortcomings of Jaisle and applicant's description of the prior art.

Thus, for at least the reasons discussed above, neither Jaisle, applicant's description of the prior art nor Mehta, alone or in combination, render the limitations of independent claim 34 obvious. Applicants assert that independent claim 34 is patentably distinguishable over Jaisle, applicant's description of the prior art, Mehta, or any combination thereof. Therefore, withdrawal of this rejection respectfully requested with regard to independent claim 34, as well as claims 15-18 and 26-30 that depend therefrom.

Claims 33, 3, 6-10, 19, 20 and 22-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaisle et al. (US 4473613) in view of applicant's description of the prior art at page 1, lines 15-20, in further view of Mehta (US 5,213,883) as applied to claims 31-32, 34, 15, 26, 27, 16-18, 28-30 and 12 above, and further in view of Koutitonsky et al. (US 5,753,078) and Scher et al. (US 4,093,766). After review of the Office Action, it appears claim 12 should have been included with independent claim 33 rather than independent claim 34. Therefore, Applicants have addressed this rejection with regard to claims 33, 3, 6-10, 12, 19, 20 and 22-25. Applicants respectfully traverse this rejection.

Claim 33, although not identical in scope to independent claim 31, is directed to a method of manufacturing a paper and recites limitations similar to those recited in claim 31. For example, claim 33 recites the acrylate is predominately in the interior of the paper.

Additionally, claim 6 further recites the paper is de-aerated before the acrylate-containing dispersion is pressed into the paper. In this way the air present in the paper is replaced by the dispersion or mixture. *See* pg. 4, ll. 29-30. The paper produced in accordance with the present invention is advantageous over finish films since acrylate is present in the paper and not simply wholly or largely on the surface. *See* pg. 5, ll. 29-31.

Neither Jaisle, applicant's description of the prior art, Mehta, Koutitonsky nor Scher, alone or in combination, teach or suggest the acrylate is predominately in the interior of the paper. Additionally, neither Jaisle, applicant's description of the prior art, Mehta, Koutitonsky nor Scher, alone or in combination, teach or suggest the paper is de-aerated before the acrylate containing dispersion is pressed into the paper.

For at least the reasons discussed above, neither Jaisle, applicant's description of the prior art, Mehta, alone or in combination, render the features of independent claim 33

obvious. Furthermore, neither Koutitonsky nor Scher, alone or in combination, remedy the shortcomings of Jaisle, applicant's description of the prior art and Mehta.

Thus, for at least the reasons discussed above, neither Jaisle, applicant's description of the prior art, Mehta, Koutitonsky nor Scher, alone or in combination, render the limitations of independent claim 33 obvious. Applicants assert that independent claim 33 is patentably distinguishable over Jaisle, applicant's description of the prior art, Mehta, Koutitonsky, Scher, or any combination thereof. Therefore, withdrawal of this rejection respectfully requested with regard to independent claim 33, as well as claims 3, 6-10, 12, 19, 20 and 22-25 that depend therefrom.

Conclusion

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Anne M. Murphy, Reg. No. 54,327, at (612) 371.5267.

Respectfully submitted,

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